

CLAIMS

1. In the fabrication of integrated circuit (IC) structures, a method for forming a structure resistant to ozone stripping, the method comprising:
- 5 forming a first electrically conducting layer;
 forming an ozone resistant barrier overlying the first electrically conducting layer; and,
 forming a metal layer overlying the ozone resistive barrier.
- 10 2. The method of claim 1 wherein forming a first electrically conducting layer includes forming a conducting layer from indium tin oxide (ITO).
3. The method of claim 1 wherein forming an ozone
15 resistant barrier overlying the first electrically conducting layer includes forming an ozone resistant barrier from a material selected from the group including Ta, Ti, TaN, TiN, Al, Al compounds, tungsten, chrome, and copper.
- 20 4. The method of claim 1 wherein forming a metal layer overlying the ozone resistant barrier includes forming a reflective metal layer from Al.
5. The method of claim 4 wherein forming a metal
25 layer overlying the ozone resistant barrier includes forming a layer of Al having a thickness of greater than 1000 Å.

6. The method of claim 1 in which a reflective liquid crystal display (LCD) IC structure is formed;

wherein forming a first electrically conducting layer
5 includes forming an electrode; and,

wherein forming a metal layer overlying the ozone resistant barrier includes forming an LCD reflector.

7. The method of claim 1 in which a busline IC
10 structure is formed; and,

wherein forming a metal layer overlying the ozone resistant barrier includes forming the top metal layer of a busline.

8. In the fabrication of liquid crystal displays (LCDs)
15 integrated circuits (ICs), a method for forming a LCD structure resistant to ozone stripping, the method comprising:

forming an indium tin oxide (ITO) layer electrode;

forming an ozone resistant barrier overlying the electrode
from a material selected from the group including Ti, Ta, TiN, and
20 TaN; and,

forming an Al reflector overlying the ozone resistant barrier.

9. A method for stripping a liquid crystal display (LCD)
25 surface, the method comprising:

forming a first electrically conducting layer;

forming an ozone resistive barrier overlying the first electrically conducting layer;

forming a metal layer overlying the ozone resistive barrier;

forming a photoresist pattern with openings exposing
5 overlying areas of the metal layer;

through the openings in the photoresist, etching the exposed metal layer and underlying ozone resistant barrier; and,
stripping the photoresist with an ozone compound.

10 10. The method of claim 9 wherein forming a first electrically conducting layer includes forming a conducting layer from indium tin oxide (ITO).

11. The method of claim 9 wherein forming an ozone
15 resistant barrier overlying the first electrically conducting layer includes forming an ozone resistant barrier from a material selected from the group including Ta, Ti, TaN, TiN, Al, Al compounds, tungsten, chrome, and copper.

20 12. The method of claim 9 wherein forming a metal layer overlying the ozone resistant barrier includes forming a reflective metal layer from Al.

13. The method of claim 12 wherein forming a metal
25 layer overlying the ozone resistant barrier includes forming a layer of Al having a thickness of greater than 1000 Å.

14. The method of claim 13 in which a reflective LCD structure is being stripped;

wherein forming a first electrically conducting layer
5 includes forming an ITO electrode;

wherein forming an ozone resistant barrier overlying the first electrically conducting layer includes forming an ozone resistant barrier from a material selected from the group including Ta, Ti, TaN, and TiN;

10 wherein forming a metal layer overlying the ozone resistant barrier includes forming an Al layer; and,
the method further comprising:
following the ozone stripping, leaving an LCD reflector structure.

15 15. The method of claim 14 wherein stripping the photoresist with an ozone compound includes stripping with a compound having 85 parts per million (PPM) of ozone, or greater.

20 16. The method of claim 14 wherein stripping the photoresist with an ozone compound includes exposing the IC to the ozone compound for approximately 45 minutes.

25 17. The method of claim 14 wherein forming a metal layer overlying the ozone resistant barrier includes forming an Al layer having a thickness of greater than 1000 Å; and,

wherein stripping the photoresist with an ozone compound includes removing approximately 800 Å of Al exposed by the openings in the photoresist.

- 5 18. A liquid crystal display (LCD) reflector structure resistant to ozone stripping, the reflector structure comprising:
a first electrically conducting layer;
an ozone resistive barrier overlying the first electrically
conducting layer; and,
10 a metal layer overlying the ozone resistive barrier.
19. The reflector structure of claim 18 wherein the first electrical conducting layer is indium tin oxide (ITO).
- 15 20. The reflector structure of claim 18 wherein the ozone resistant barrier is a material selected from the group including Ti, Ta, TiN, TaN, Al, Al compounds, tungsten, chrome, and copper.
21. The reflector structure of claim 18 wherein the
20 metal layer is a reflective metal layer material selected from the group including Al.
22. A liquid crystal display (LCD) reflector structure resistant to ozone stripping, the reflector structure comprising:
25 a first electrically conducting layer of indium tin oxide (ITO);

an ozone resistive barrier overlying the first electrically conducting layer selected from the group including Ti, Ta, TiN, TaN, Al, Al compounds, tungsten, chrome, and copper; and,

5 an Al reflective metal layer overlying the ozone resistive barrier.

23. A liquid crystal display (LCD) reflector structure resistant to ozone stripping, the reflector structure comprising:

10 a first electrically conducting layer selected from the group including Ti, Ta, and Al; and,

a reflective metal layer overlying the first electrically conducting layer selected from the group including Al.

24. In the fabrication of integrated circuit (IC) structures, a method for forming a structure resistant to ozone stripping, the method comprising:

forming a first electrically conducting layer; and,
forming a metal layer overlying the electrically conducting layer.

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25. The method of claim 24 wherein forming a first electrically conducting layer includes forming a conducting layer from a material selected from the group including Ti, Ta, and Al.

26. The method of claim 24 wherein forming a metal layer overlying the first electrically conducting layer includes forming a reflective metal layer from Al.

5 27. The method of claim 26 wherein forming a metal layer overlying the first electrically conducting layer includes forming a layer of Al having a thickness of greater than 1000 Å.

28. The method of claim 24 in which a reflective liquid
10 crystal display (LCD) IC structure is formed;

wherein forming a first electrically conducting layer includes forming an electrode; and,

wherein forming a metal layer overlying the first electrically conducting layer includes forming an LCD reflector.

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29. The method of claim 24 in which a busline IC structure is formed; and,

wherein forming a metal layer overlying the first electrically conducting layer includes forming the top metal layer of a

20 busline.